

CPMT Introduction: According to the rapid development of Chinese patent cause, Chinese patent documentation plays a more and more important role in the world's intellectual property field. China Patent Information Center, which is a large national patent information services, has made a breakthrough in machine translation of Chinese patent documents-the user-friendly, fast, stable online Chinese-English machine translation system, so that we can provide users automatic machine translation services through the Internet in the international patent documents exchange and cooperation. CPMT researched and developed by China Patent Information Center. If you need accurate human translation, please Contact Us.

#### Claim

1, ink casket that has collapsible ink chamber including a housing main body, is equipped with an appearance room that has the opening face in the housing main body, and on locating this opening face with apron lid, and its one end is equipped with a spray nozzle device;

Characterized in:

A flexible film sealing is indoor in the appearance of this housing main body, and forms an ink chamber with the housing main body;

A pressure-regulating device is a tensile elasticity component, and on its one end was fixed in flexible film, the other end was fixed in on the apron of housing main body.

2, the ink casket that has collapsible ink chamber according to claim 1 characterized in: the one end that this housing main body was equipped with the spray nozzle device forms an ink efferent, and the spray nozzle device is then locate on this ink efferent.

3, the ink casket that has collapsible ink chamber according to claim 2, characterized in: this ink efferent is sealed to this flexibility film.

4, the ink casket that has collapsible ink chamber according to claim 1 characterized in: this extension spring is the form spring that spirals, it is the most peripheral be fixed in flexible film on, and inner edge is fixed in on the apron.

5, ink casket that has collapsible ink chamber including a housing main body, is equipped with an appearances room that has the opening face in it, and on locating this opening face with the apron lid, and its one end is equipped with a spray nozzle device, characterized in: the flexible film bags of a holding ink physically, set up in the appearance of housing main body indoor, including the second lateral wall and the first side wall on being fixed in the side wall surface of housing main body; On a tensile elasticity component, its one end were fixed in the second lateral wall of the flexible film bags body, the other end was fixed in on the apron of housing main body.

6, the ink casket that has collapsible ink chamber according to claim 5 characterized in: the one end that this housing main body was equipped with a spray nozzle device forms an ink efferent, and the spray nozzle device is then locate on this ink efferent.

7, the ink casket that has collapsible ink chamber according to claim 6, its characteristic is in

#### Claim

In: this ink efferent is sealed to this flexibility film bags body.

8, the ink casket that has collapsible ink chamber according to claim 5 characterized in: this extension spring is the form spring that spirals, it is the most peripheral be fixed in the flexible film bags body on, and on the fixed apron of inner edge.

The ink casket that has collapsible ink chamber

This utility model relates to the ink casket of an inkjet printing equipment.

Practise knowing the ink casket structure of inkjet printing equipment, like United States Patent (USP) US the 5767882nd number, not producing black phenomenon in order to make the printing equipment when printing with Louing, set up a pressure adjustment component usually in the ink chamber, the pressure in the steerable ink chamber of this pressure adjustment component is under the circumstances of negative pressure, and messenger's printing equipment is in the printing, and the ink is unlikely to be spilt by the spray nozzle device. And the ink casket of the inkjet printing equipment of No. 5767882nd patent of this United States US structure is arranged in order to supply the China ink when the inkjet is printed, and its ink chamber be a collapsible cavity, and when ink in the ink chamber was blown out by the spray nozzle device, the ink chamber can be along with the outflow of ink, compresses into less cavity by the pressure in the external world, and in the make-up gas gets into the ink chamber separately, the stable effect of confession China ink of production in the time of can reaching the inkjet printing.

Yet this kind of ink casket is in when equipment, must be fixed in the plate body respectively with two films that can move each other in advance on, again with its sealing on a rigid body, then, be fixed in the housing main body in ink chamber with this rigid body again in, in this way, it is fairly inconvenient on making, and its relative manufacturing cost is also higher.

The purpose of this utility model provides an ink casket that has collapsible ink chamber, tightness China ink and the suitable efficiency of confession China ink when it has the inkjet printing, and the simple structure, the equipment of being convenient for can reduce the manufacturing cost.

The technical scheme of this utility model is:

An ink casket that has collapsible ink chamber including a housing main body, is equipped with an appearance room that has the opening face in the housing main body, and on locating this opening face with apron lid, and its one end is equipped with a spray nozzle device; Characterized in:

A flexible film sealing is indoor in the appearance of this housing main body, and forms an ink chamber with the housing main body;

A pressure-regulating device is a tensile elasticity component, and on its one end was fixed in flexible film, the other end was fixed in on the apron of housing main body.

The said ink casket that has collapsible ink chamber characterized in: the one end that this housing main body was equipped with the spray nozzle device forms an ink efferent, and the spray nozzle device is then locate on this ink efferent.

The said ink that has a collapsible ink chamber li, characterized in: this ink efferent is sealed to this flexibility film.

The said ink casket that has collapsible ink chamber characterized in: this extension spring is the form spring that spirals, it is the most peripheral be fixed in flexible film on, and inner edge is fixed in on the apron.

An ink casket that has collapsible ink chamber including a housing main body, is equipped with an appearances room that has the opening face in it, and on locating this opening face with the apron lid, and its one end is equipped with a spray nozzle device, the flexible film bags of a holding ink physically, set up in the appearance of housing main body indoor, including the

second lateral wall and the first side wall on being fixed in the side wall surface of housing main body; On a tensile elasticity component, its one end were fixed in the second lateral wall of the flexible film bags body, the other end was fixed in on the apron of housing main body.

The said ink casket that has collapsible ink chamber characterized in: the one end that this housing main body was equipped with a spray nozzle device forms an ink efferent, and the spray nozzle device is then locate on this ink efferent.

The said ink casket that has collapsible ink chamber characterized in: this ink efferent is sealed to this flexibility film bags body.

The said ink casket that has collapsible ink chamber characterized in: this extension spring is the form spring that spirals, it is the most peripheral be fixed in the flexible film bags body on, and on the fixed apron of inner edge.

The effect of this utility model is: the ink casket that has a collapsible ink chamber of this utility model, and when the spray nozzle device carried out the inkjet and prints, the ink the ink chamber in reduced, and this the flexibility film or the flexible film bags body can compress by the ambient pressure, and be suitable in order to guarantee the supplying China ink. Flexible film

或柔性薄膜袋体是由弹性元件固定住，而不必另行固定一板体或刚性主体，可将其直接置入外壳主体之容置室内，其组装上相当之便利。

In sum, this utility model has a black casket in scalable ink chamber, its have supply when the inkjet is printed the China ink in the same direction as and the efficiency of tightness China ink, and its simple structure, equipment facility, but reduction in production costs.

The technological content of detail of this utility model coordinates graphic explanation as follows now:

The decomposition chart of the ink casket structure in Fig. 1 collapsible ink chamber for this utility model has.

The combination cross sectional view of the ink casket structure in Fig. 2 collapsible ink chamber for this utility model has.

The sketch map of the ink casket structure in Fig. 3 collapsible ink chamber for this utility model has.

Another implementation illustration of the ink casket structure in Fig. 4 collapsible ink chamber for this utility model has.

Please consult Fig. 1, the ink casket that has a collapsible ink chamber of this utility model is including 10, one apron of a housing main body, 12, one flexible film, 14 and one pressure-regulating device (this embodiment is elastic element 16).

Housing main body 10 is side 18, downside 20, left surface 22,24 and one trailing flank 26 of right flank on one, in order to form 28 holding inks of an appearance room, makes and holds the room and form an opening face 30. 10 one end of housing main body are equipped with an ink efferent 33, be equipped with a spray nozzle device 34 and be used for blowing out the ink on ink efferent 33.

Flexible film 14 is closing caps on the opening face that holds room 28 30, on the opening face 30 that holds room 28 is located to 12 lids of apron, forms a collapsible ink chamber with housing main body 10, and the pressure-regulating device be a disc tensile elasticity component 16, and its outer peripheral edges 32 are fixed in side 38 outside the flexible film 14, make flexible film 14 can do the integral translation, and 16 inner edges 36 of elastic element are on being fixed in apron 12, laps 12 at last then on the opening face 30 that holds room 28 that is

fixed in, and lives ink chamber cap seal, and still, it is 10 interior in order to compress flexible film 14 that the outside air can get into the housing main body.

Please coordinate and consult Fig. 2, when the ink casket of this utility model of equipment, with 14 closing caps of flexible film in the opening face 30 that holds room 28, can pour into the ink in the ink chamber that forms, then be fixed in outside the flexible film 14 side 38 with periphery 32 outside the elastic element 16 on, the equipment of ink casket can be accomplished on being fixed in apron 12 to 36 its inner edges, what the member was suitable promptly simplifies, it is comparatively easy just to assemble.

Please coordinate and consult Fig. 3, when spray nozzle device 34 carried out the inkjet and prints, ink in the ink chamber that the appearances room 28 and the flexible film 14 of housing main body 10 formed was during by 34 blowouts of spray nozzle device, and the pressure in it reduces thereupon, and at this moment, the ambient pressure will push away and support flexible film 14 and toward housing main bodies 26 removals of side 10 after, can supply blackly suitable during messenger's inkjet printing.

And when 14 26 removals of side backward of flexible film, it by the restoring force of elastic element, will form a negative pressure with tensile elasticity component 16 in the ink chamber, the unlikely Lou black phenomenon that leads to the fact when making the inkjet print.

Please consult Fig. 4, the ink chamber that this is collapsible can for the flexible film bags body 40 for the holding ink, it sets up in the appearances room of housing main body 10 28, its side wall surface 26 after a the first side wall 42 is fixed in housing main body 10 goes up and a second lateral wall 44 lies in 12 one sides of apron, and elastic element 16 sets up in second lateral wall 44 and laps 12, on periphery 32 is fixed in second lateral wall 44 outside the elastic element 16, and inner edge 36 is fixed in and laps on 12.

Like this, when the inkjet was printed, it reached the black phenomenon that reaches the tightness China ink of arranging of confession to do, and its simple structure, equipment can reduce its manufacturing cost easily.

[19]中华人民共和国国家知识产权局

[51]Int. Cl<sup>7</sup>

B41J 2/175

[12] 实用新型专利说明书

[21] ZL 专利号 99218646.3

[45]授权公告日 2000 年 10 月 25 日

[11]授权公告号 CN 2402478Y

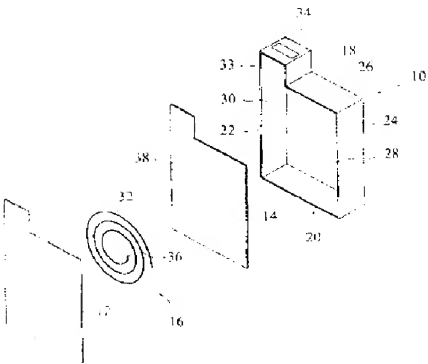
[22]申请日 1999.8.30 [24]颁证日 2000.9.2  
[73]专利权人 威硕科技股份有限公司  
地址 中国台湾  
[72]设计人 蔡宪书 宋文港 吴志成 杨长谋

[21]申请号 99218646.3  
[74]专利代理机构 永新专利商标代理有限公司  
代理人 李树明

权利要求书 2 页 说明书 4 页 附图页数 2 页

[54]实用新型名称 具有可收缩墨水腔的墨水匣  
[57]摘要

一种用于喷墨打印装置的具有可收缩墨水腔的墨水匣,包括外壳主体,其内设有一容室,且其一端设有一喷嘴装置,一柔性薄膜封固于该外壳主体之容室,而与外壳主体形成一墨水腔;一拉伸弹性元件,其一端固定于柔性薄膜上,另一端固定于外壳主体上。



ISSN 1 0 0 8 - 4 2 7 4

THE UNIVERSITY OF CHICAGO

一柔性薄膜封固于该外壳主体之容室内，而与外壳主体形成一墨水腔；

2、如权利要求 1 所述的具有可收缩墨水腔的墨水匣，其特征在于：该外壳主体设有喷嘴装置的一端形成一墨水输出部，而喷嘴装置则设于该墨水输出部上。

4、如权利要求 1 所述的具有可收缩墨水腔的墨水匣，其特征在于：该拉伸弹簧为一盘绕状弹簧，其最外围固定于柔性薄膜上，而最内缘固定于盖板上。

6、如权利要求 5 所述的具有可收缩墨水腔的墨水匣，其特征在于：该外壳主体设有一喷嘴装置的一端形成一墨水输出部，而喷嘴装置则设于该墨水输出部上。

1



于：该柔性薄膜袋体封住该墨水输出部。

8、如权利要求 5 所述的具有可收缩墨水腔的墨水匣，其特征在于：该拉伸弹簧为一盘旋状弹簧，其最外围固定于柔性薄膜袋体上，而最内缘固定盖板上。



## 说 明 书

---

### 具有可收缩墨水腔的墨水匣

本实用新型涉及一种喷墨打印装置的墨水匣。

习知喷墨打印装置之墨水匣构造，如美国专利 US 第 5767882 号，为了使打印装置在进行打印时不产生漏墨的现象，通常于墨水腔内设置一压力调节元件，该压力调节元件可控制墨水腔内之压力在负压的情况下，使打印装置在打印中，墨水不致由喷嘴装置漏出。且该美国 US 第 5767882 号专利之喷墨打印装置之墨水匣构造，为了能在喷墨打印时供墨顺，其墨水腔为一可收缩之腔体，当墨水腔内之墨水由喷嘴装置喷出时，墨水腔可随着墨水之流出，藉由外界之压力压缩成较小之腔体，而不必另行补充气体进入墨水腔内，即可达到喷墨打印时产生稳定供墨之效果。

然而，此种墨水匣在组装时，必须将二可相互移动之薄膜分别先行固定于板体上，再将其封固于一刚性体上，而后，再将该刚性体固定于墨水腔之外壳主体内，如是，其在制造上相当不便，且相对的其制造成本亦较高。

本实用新型的目的在于提供一种具有可收缩墨水腔的墨水匣，其具有喷墨打印时不漏墨及供墨顺之功效，并且构造简单，便于组装，可降低制造成本。

本实用新型的技术方案是：

一种具有可收缩墨水腔的墨水匣，包括有一外壳主体，外壳主体内设有一具有开口面的容室，而以盖板盖设于该开口面上，且其一端设有一喷嘴装置；其特征在于：

一柔性薄膜封固于该外壳主体之容室内，而与外壳主体形成一墨水腔；









请配合参阅图 2，在组装本实用新型之墨水匣时，将柔性薄膜 14 封盖于容室 28 之开口面 30，即可将墨水灌注于所形成之墨水腔内，而后将弹性元件 16 之外周缘 32 固定于柔性薄膜 14 之外侧面 38 上，其内缘 36 则固定于盖板 12 上，即可完成墨水匣之组装，即构件相当的精简，且组装上较为容易。

请配合参阅图 3，当喷嘴装置 34 进行喷墨打印时，外壳主体 10 之容室 28 与柔性薄膜 14 所形成之墨水腔内之墨水由喷嘴装置 34 喷出时，其内之压力随之降低，此时，外界压力将推抵柔性薄膜 14 往外壳主体 10 之后侧面 26 移动，使喷墨打印时可供墨顺。

而在柔性薄膜 14 往后侧面 26 移动时，其将拉伸弹性元件 16，藉由弹性元件之回复力，墨水腔内将形成一负压，使喷墨打印时不致造成漏墨现象。

请参阅图 4，该可收缩墨水腔可为一柔性薄膜袋体 40 用以容置墨水，其设置于外壳主体 10 之容室 28 内，其包括有一第一侧壁 42 固定于外壳主体 10 之后侧壁面 26 上及一第二侧壁 44 位于盖板 12 一侧，而弹性元件 16 是设置于第二侧壁 44 与盖板 12 间，弹性元件 16 之外周缘 32 固定于第二侧壁 44 上，而内缘 36 固定于盖板 12 上。

这样，在喷墨打印时，亦可达到供墨顺及不漏墨之现象，其构造简单、组装容易，可降低其制造成本。

99-09-01

# 说明书附图

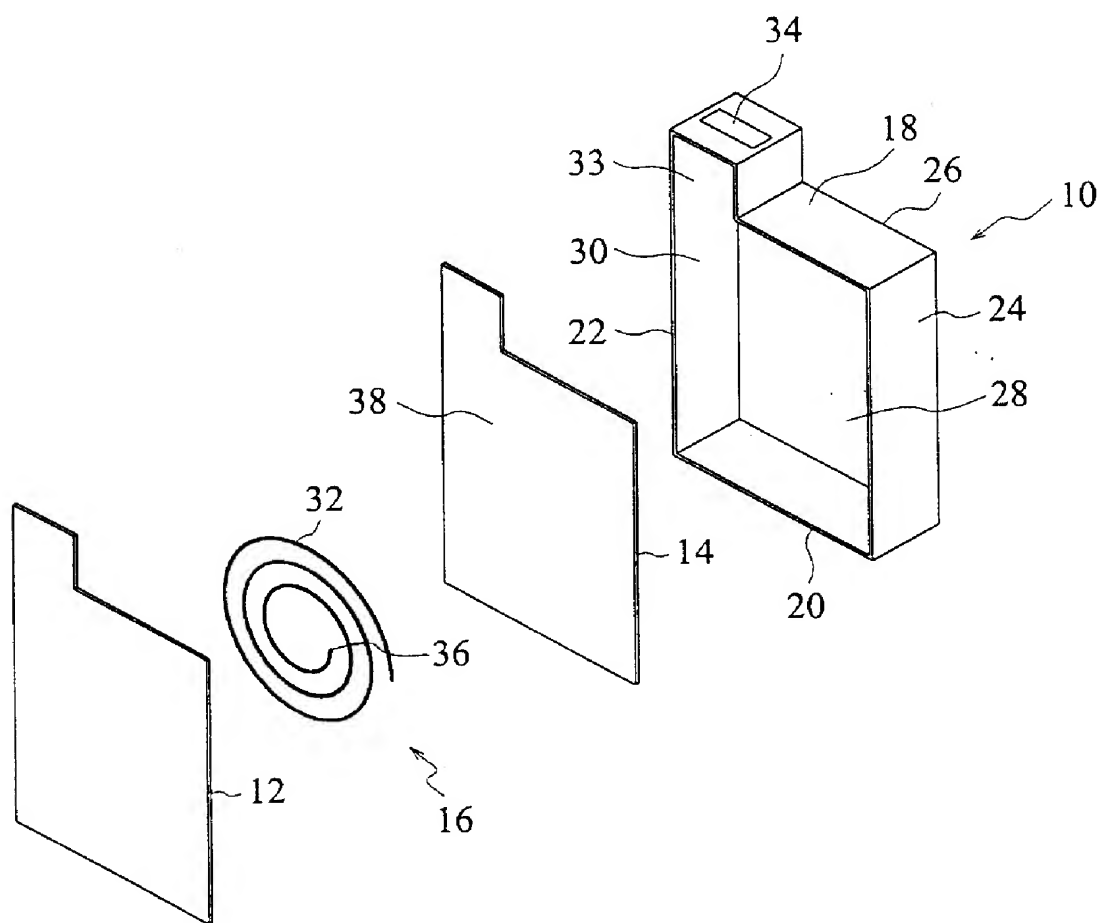


图 1

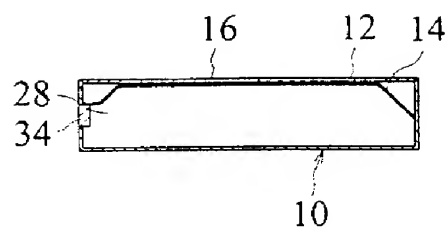


图2

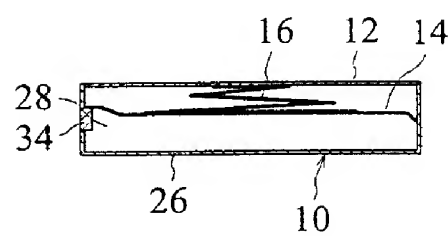


图3

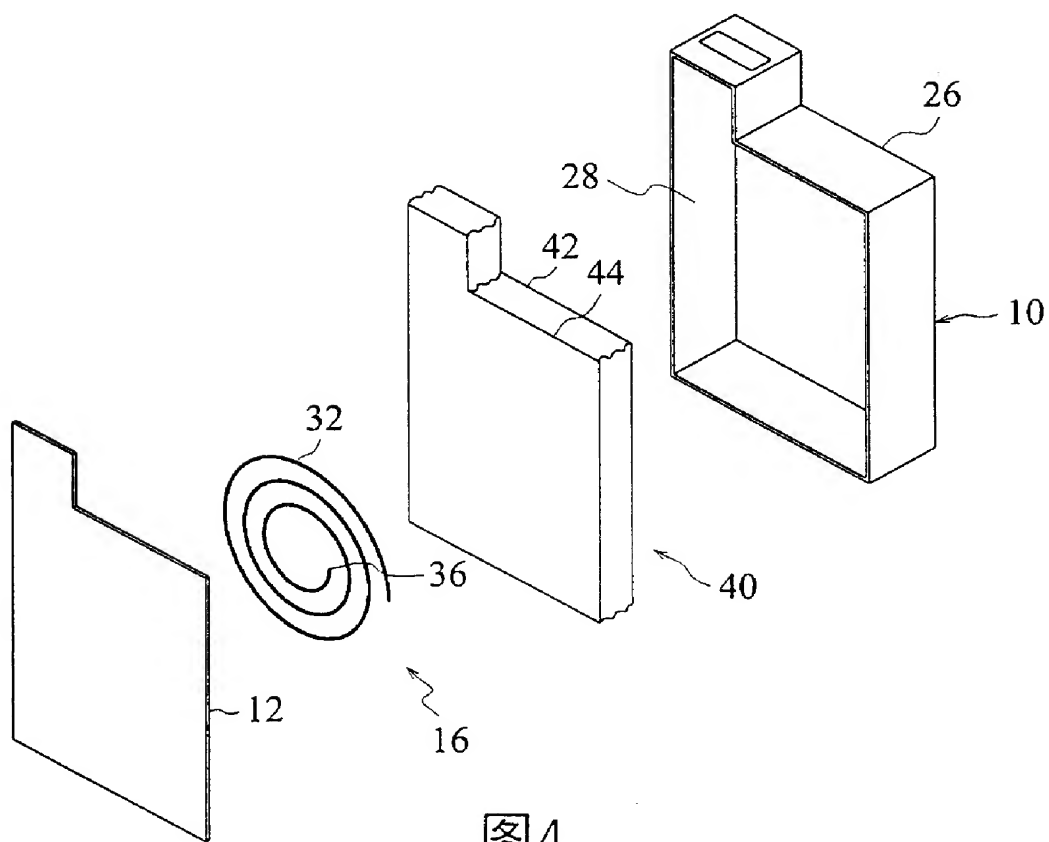


图4